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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,997	04/20/2004	David W. Caldwell	49256-109423	6796
23644 7590 02/01/2011 BARNES & THORNBURG LLP P.O. Box 2786 CHICAGO, IL 60690-2786				
EXAMINER				
ARBES, CARL J				
ART UNIT		PAPER NUMBER		
3729				
NOTIFICATION DATE		DELIVERY MODE		
02/01/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent-ch@btlaw.com

# Office Action Summary

**Application No.**

10/828,997

**Applicant(s)**

CALDWELL ET AL.

**Examiner**

C. J. Arbes

**Art Unit**

3729

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date herein.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Inasmuch as Applicants formerly elected method claims only method claims 1-19 will now be examined on their merits. That is claims 20-25 are deemed to have been non-elected. Therefore Applicants are required to cancel these claims or take other appropriate action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no proper antecedent for ...said layer of third conductive material... and hence this claim is held to be unclear, vague and indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 15, 16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by over Stoddard EP Pat No. (0 265 110); hereinafter Stoddard. (N.B. a foreign language non-English language, i.e. Japanese equivalent document is of record) This prior art speaks for itself. However in order to further understand how the Office is construing this prior art the reader is invited to review the brief comments provided hereinbelow.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-14, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoddard.

Stoddard teaches a method of using a transparent electrode. A panel for a liquid crystal display (LCD) is formed by depositing a transparent conductive material such as Indium-Tin Oxide (ITO) (2) onto a transparent backing (1). Nickel can be used and will serve as a bus to power the transparent material (2). The Nickel is first etched to a bus configuration and then the ITO is etched to produce one or more picture elements. (Cf. 1<sup>st</sup> page of the Document) Stoddard also teaches optionally etching the transparent conductive material to form one or more elements connected to one or more busses. (Cf. Col. 2) Stoddard also teaches 2 panels, one on either side of liquid crystal material 6. (Cf. Col. 6) As applied to claims 5, 6, 11 and 12 Stoddard teaches connecting an electrical component e.g. an external power source by soldering (Cf. Col. 6). Although Stoddard does not explicitly teach applying a 3<sup>rd</sup> conductive material onto the layer of a 2<sup>nd</sup> conductive material, Stoddard does teach providing Ni, Cu, Au, Ag, or Al for the conductive material and also notes that the material should have a resistivity of less than 20 micro-ohm cm and have a thickness of between 75-150 nm and by inference it is held a PHOSITA would have been able to provide a 3<sup>rd</sup> conductive material and place this 3<sup>rd</sup> conductive material onto the 2<sup>nd</sup> conductive material so long as the

resistivity and thickness parameters have been met. As applied to claim 9 it is held that since Niobium behaves substantially as Indium with respect to its physical and chemical properties, it would have been obvious to substitute Niobium for Indium for use as the 2<sup>nd</sup> conductive material. As applied to claim 10 inasmuch as Stoddard teaches that Cu can be used for the conductive material a PHOSITA would be able to conclude with only ordinary skill that copper can be used in the method of fabricating the electrical circuit. As applied to claims 11 and 12 Stoddard teaches that transparent electrode 5 and that it can be connected to an external power source by soldering (Cf. Col. 6) Therefore it would have been obvious to connect an electrical component to the 2<sup>nd</sup> conductive material by soldering. As applied to claims 13 and 14 inasmuch as Stoddard teaches sputtering as a means of providing an ITO coating on the substrate (Cf. Col 4) this described technique does involve a vacuum and a pretreatment of the substrate and hence claims 13 and 14 it is held to have been obvious.

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 19 is held to be allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. J. Arbes whose telephone number is 571-272-4563. The examiner can normally be reached on M, T, R and F from 8 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Banks, can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/C. J. Arbes/

Primary Examiner, Art Unit 3729